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| 10/577,433 | 04/27/2006 | Shinje Kim | 1012679-000120 | 2079 |
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| EXAMINER IBRAHIM, MEDINA AHMED | | | | |
| ART UNIT 1638 | | PAPER NUMBER | | |
| NOTIFICATION DATE 09/09/2010 | | DELIVERY MODE ELECTRONIC | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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offserv@bipc.com

Office Action Summary

Application No.

10/577,433

Applicant(s)

KIM ET AL.

Examiner

Medina A. Ibrahim

Art Unit

1638

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 July 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 11-13 and 17 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1 and 4-10 is/are allowed.
- 6) ☒ Claim(s) 2,3 and 14-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date 04/27/06.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ ~~Notice of Informal Patent Application~~
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Group I, claims 1-3, 5-10, and 15-16, in the reply filed on 07/26/10 is acknowledged. Claims 4 and 14 are rejoined with the elected group. The requirement is made Final

Claims 1-17 are pending.

Claims 11-13 and 17 are withdrawn from consideration as being directed to the non-elected invention.

Claims 1-10, and 14-16 are examined.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 2 is rejected under 35 U.S.C. 102(b) as being anticipated by Staskawicz et al (US 6,262, 343; Accession no AAF633301; deposited 02 May 2001).

The claim is directed to a primer for the detection of cucumber mosaic virus resistant plants which comprises consecutive nucleotides of SEQ ID NO: 2 or 22.

Staskawicz et al teach an isolated nucleotide comprising 18 contiguous bases of SEQ ID NO: 22 (see alignment of sequences shown below). The intended use of the claimed invention must result in a structural difference between the claimed invention

and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. The cited reference teaches that the Bs2 nucleic acid molecule, which a disease resistance gene, is also useful as polymerase chain reaction (PCR) primers.

```

RESULT 2
AAF63301/c
ID   AAF63301 standard; DNA; 31491 BP.
XX
AC   AAF63301;
XX
DT   02-MAY-2001 (first entry)
XX
DE   Pepper Bs2 resistance gene.
XX
KW   Bs2; pepper; pathogen resistant; Xanthomonas campestris pv vesicatoria;
KW   Xcv; bacterial spot disease; transgenic plant; crop; fruit; flower; ds.
XX
OS   Capsicum annuum.
XX
PN   US 6262343.
XX
PI   Staskawicz BJ, Dahlbeck D, Tai TH;
XX
DR   WPI; 2001-168560/17.
DR   P-PSDB; AAB72198.

Query Match          21.2%;   Score 1186.2;   DB 1;   Length 31491;
Best Local Similarity 66.9%;
Matches 1827;   Conservative    0;   Mismatches 878;   Indels 24;   Gaps
9;

Qy      308   CTGTGATAGGGTTTGATCCACCCTAGTATTCTCTGTAGGGTGCTCCTGCTATTATT
367      | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db      24388 CTAGACAAAGGTTTTATTTCGTCTACTGTTTCCCATGGGGTACACCCGTGCTCTTCGTG
24329

Qy      368   TGTTAGAAAGATGGTTCCTTTAGATGTGTATAGATTATCGTAGTTGAATAAGGTGACT
427      | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db      24328 CGAAAGAAGGATGGGTCCCTTCGGATGTGCATAGACTACCGTCAGTTGAATAAGATCATG
24269

Qy      428   ATGAAGAAAAAGTACCCTCTCCCTAAGATTGATGATTATTATCCAGCTTCAGGGTGCA
487      | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db      24268 ATTAAAAATAAATATCCTCTTCCTAGGATTGATGACCTTTTGTACCAGCTTCAGGGTGCT
24209

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Qy 488 AAGTACTTTTCTAAAAATTAATCTCTGTTAAGGTTATTATTAGTTGAAAATTAGGGATGTG
547 |||| ||||| |||| | || ||| |||| | || ||||| ||||| |||||
Db 24208 AAGTGCTTTTCAAAATAGACCTTCGTTCCGGTTACCATCAGTTGAAAATTAGGGAGTCA
24149

Qy 548 GATATCCCTAAGGCTACTTTTCAAACCCAGTGTGGTCATTATGAGTTTTTGGTGATGTCC
607 || || |||| | || | || | |||| | || ||||| ||||| ||||| |||||
Db 24148 GACATACCCAAGACAGCCTTCGGAACCCGATATGGTCACTACAAATTTTGTAGTCATGTCC
24089

Qy 608 TATGGTTGACTAATGCTCCGGTGGCAATCAAGGATCTTATGAACATAGTATTCTGTTAG
667 | || |||| | || | || | ||||| ||||| ||||| ||||| |||||
Db 24088 TTCGGTTGAGTAACGCCCTGCAGCCTTCATGGATCTTATGAGTAGAGTGTTCCTGCTCAA
24029

Qy 668 TTCTGGATTTATTTGTTATTGTGTTAATAGATGATATTTTGGTATATTCTAAGAGCGAG
727 || || |||| | || | |||| | || ||||| ||||| ||||| ||||| |||||
Db 24028 TTTATTGACTTGTTCGTCATTGTATTATTGATAATATTCTGATCTATTCTAAGAGTAAA
23969

Qy 728 GCTGATCACGCCGATCATCTCCATATAGTATTGCAAACCTTTTAAAGATCAACTGTTGTAC
787 | ||||| || |||| | || | |||| | || ||||| ||||| ||||| ||||| |||||
Db 23968 GAGGATCACCAATCACCTCCGAATTATCCTTCAGACCCCTTAAGGATTATCAACTATAT
23909

Qy 788 GCCAAATTTTCTAAGTGTGAATTATGGTTGAAGTGGTGACCTTCCTGGTTATATTATT
847 ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db 23908 GCCAAATTTTCTAAGTGTAAATCTGGTTATACGCTATTGACTTCCTGGGGCATATTGTG
23849

Qy 848 TCTAGTGAGGGGATTATGGTGGATCCACAAAAATTTTATGCGGTGAAGAAGTGGCCATAA
907 || ||||| || || | ||||| || || ||||| || || ||||| || ||||| || ||||| ||
Db 23848 TCCAGTGACCGAATAAGAGTGGATCCCTAGAAAGTTGAAGTAGTGAGAAAAAGCCATAGA
23789

Qy 908 ACCATGATTCCAACCAATATTTAGAG-TTTTGGGTTAGTTAGATATTATAGGAGGTTT
966 ||| || ||||| ||||| || ||||| ||||| || ||||| || ||||| || ||||| ||
Db 23788 CCCACGACTCCAACCGATATTTGAAGCTTTTGGGTTTGGCGGGGTATTACAGAAGGTTCT
23729

Qy 967 GTGGAGAGTTTCTCATCAATTGATGCTCTATTATTAAAGTTAACTCAGAAAAAAGGTATG
1026 || || ||||| || || | |||| | || |||| | ||||| ||||| ||||| ||
Db 23728 GTAGAAAGTTTTCTTCCATAGCTTCTCGGCTTACTAACTGACTCA-AAAAAGATGAA
23670

Qy 1027 GTTCTATGGTCCAATGCTTGTGAGGGTAGCTTTGATAAGTTGAAGGATAAGTTGACTTT
1086 |||| |||| | || | || || ||||| || ||||| ||||| ||||| ||||| ||
Db 23669 GTTTGAGTGGCTGACTTGTGTGAAAACAGTTTGTAGAAATTGAAGGACAAGCTGGCTAC
23610

Qy 1087 GGATATGATCTTGACCCCTACCCGAAGGTTTTAATGTTTTT---TTAATTTTGTATGCATC
1142 | || | ||||| ||||| ||| | || |||| | || ||||| ||||| ||||| |||||

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Db 23609 TGCTCTTGTGTTTGACCCCTCCCGAGGGTGTAGATAATTTTGTGGTTTATTGTGATGTGTC
23550

Qy 1143 CCGTGTAGGACTTGGTTGTGTTTGTATGTAGAAACAATAGGGTCTGGCCATGCTTCTA
1202 ||||| | ||||| ||||| ||||| || ||||| ||||| ||||| |||||
Db 23549 CCGTATGGGACTTGGTTGTGATTGATGAAG-CGTGGTAAGGTGATAGCTTATGCATCTA
23491

Qy 1203 GGAAATTGAAAGTTCATGAAATGAATTATGCGACACATAACTTAGAATTATTAGTTGTGG
1262 ||||| | ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db 23490 GGCAGTTAAAGGTGCATGAGTGCAGATTACCCCTACTCATGACTTGGAGTTAGCAGCCGTGG
23431

Qy 1263 TATTTTCATTGAAGCTTAGGTATCGTTATTTGTATGG-GTTCATGTTGATATATGTTTG
1321 ||||| | ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db 23430 TGTTTGTACTTAGAATCTGGAGGCATATCTCTATGGAGTGCATGTTGATATTATAGTG
23371

Qy 1322 ATCATAAGATTCGTAGTATGTGTTCAACCAGAGGAGTTGAATCTCAGGCAAGGACAT
1381 ||||| | ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db 23370 ACCATAAGAGTTTACAGTATGTTTCTCACAGAAAGAAATTAACCTTAGGCAGAGCGTT
23311

Qy 1382 GGCTTGAGTTTCTCAAAGGCTATGACATTAGTCTCCATTACAACCCAGGTAATCTAACA
1441 ||||| | ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db 23310 GGATAGAGCTTTTGAAGACTATGATATGAGTCTGCATTACCATCCGGGCAAGGCAATA
23251

Qy 1442 TGGTTGTTGGTATTCTTAGTAGGTTGTCCATGGGAAGATTATAAAATATGGATGAGGAAA
1501 ||||| | ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db 23250 TTGTAGCCGACGCCCTCAGTAGGTTTCTATGGGCAGCCTTCTTATGTAGAAGAAGGAA
23191

Qy 1502 AATGAGATTTGGTGAAGTATATTACCGATTTGGTAACCTTGGAGTTCGCTCTTTGGATT
1561 | ||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db 23190 AGAAAGAGATGGTGAAGGATATTACCGCCTTGCAAAATGGGAGTGCAGACTCTTAGATT
23131

Qy 1562 CTGAGGATGGAGGTATGGTTGTTCAAGAGTGGTGAAGTCATCTCTTAGTGTGGAAGTAA
1621 ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db 23130 CCGAAGATGGAGGGGTGATTGTTTCATGAGTTAGCTAAGTCATCTCTTTGTGCTGAAGTTA
23071

Qy 1622 AAGCGAAACATGTCTTGGATCCTATCTTAATGCAAAATCAAAGATGATGGGGTCAACAGA
1681 ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db 23070 AGGAGAAGCAGGTTGAAGATCCCATCTTGATGAAAATCAAGAAAGATGTTGGGTCAACAAA
23011

Qy 1682 AGGTTATGGCCTTCAAGATTGGTAGTAATGGTATTTTAAGGTACCAAGGTAGATTGTGTG
1741 ||||| | ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db 23010 TGGTTATGTCAATTTGAAATTAGTGGCGATAGTATTCTGAGATTTCAAGGTAGGTTGTGCG
22951

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Qy 1742 TTACCGATGTTAATGGGTTATGAGAATGAATTTTGGTTGAAGCTCATGAGTCGTGATTTA
1801 || | ||| |||| | | |||| | | || | | | |
Db 22950 TTTCGAATGTCGATGGGATACGAGAAAGAATCCTTAATGAGGCGCACACTTTGAGGTATG
22891

Qy 1802 TGGCTCATCTTGGTTTGACGAAGATGTACCATGATTCGAAGGAGATTTATTGGTTGAATA
1861 | || | | | | ||||| || || | ||||| |||||
Db 22890 TCATTCACCCAGGCTCTACTAAGATGTACCATGATCTAAAAACCTTGATTGGTGAATA
22831

Qy 1862 ATATGAAGAGAGATGTGGCAAATTTTGTGCTATGTTTCATGGTTTGCCAAACAGTGAAGG
1921 | |||| | | |||| | | |||| | | || | | |||||
Db 22830 ACATGAACCGTGTAGTGTGCTGATTTTGTGTCCAAGTGGTTGAACGTCTCAACAAATGAAGG
22771

Qy 1922 TGGGGAACCTAAGGCCCTGGTG-----GATTCTATCGCTCGTGTGGAAGTGAG
1968 | | || | |||| |||| | | || | | |||||
Db 22770 TAGAACACATGAGGCCAGTGGTACTTCCCAAGAGATAGCCCTGCCTTTATGGAAGTGGG
22711

Qy 1969 AGGTAATCAGTATGGATTTTGTTCAGTCTTCCACGGTCTCGTAGTAAATTTATTATGA
2028 | | | | | |||| | | | | | |||| | | | | |
Db 22710 ATATGATAAAACATGGACTTCATTACAGGACTTCCGAGATCCCGAAACCAGTATGATTCTA
22651

Qy 2029 TTTGGGTCATCATTGATAGGATGTCCTAAGTCTACTACTTCTTGCCAGTGAGGACTAATA
2088 | | | | | |||| | | | | | |||| | | | | |
Db 22650 TATGGGCGATTGTAGATCGGTTGACCAAGTCAGCCTACTTTTTCCTGTGAGGACTAATT
22591

Qy 2089 ATTCATGGGAGGACTACGCGAAGTTTTCATTCAGGATATCATCAAGTTGCATGGTGCTT
2148 || | |||| | | | |||| | | |||| | | |||||
Db 22590 ATTTGGGAGAGGTTTATTCTAAGATTACATTGAGGAGATAGTTCGATTGCATGGGGCAC
22531

Qy 2149 TAGTTTCTATTATATCTGATCGAGGTACTCAGTTCTCGTCTAACTTTTAGTGATTATTTT
2208 | | ||||| |||| | ||||| |||| | || | |||| | || | ||||
Db 22530 CAATGTCATTATTATCCGATAGAGGTACGAGTTTTCATCTCAGTTTGGAGATCCTTTC
22471

Qy 2209 ATGTAGGTTTGGGGACTAAGGTGAACCTATTACCATTTCACCCACAGAAAGATGTAC
2268 | | |||| | | | |||| | | |||| | | |||||
Db 22470 AGAAGGGTTTAGGTACACAAAGTGAATTTGAGCACAGGTTCCACCCTCAGACGGATGGAC
22411

Qy 2269 AAGCAGAGAGGACTATTACAGACTTTGGATAGTATGCTAAAGGTATTGTGATTAACATTTT
2328 |||| | | | ||||| | | || | | || | | |||||
Db 22410 AAGCTGAGCGTACCAATTCAGACCCCTCGAAGATATGTTAGGGCATGCGTAATTGATTTC
22351

Qy 2329 GTGGTATTGGGTTTACCATATGCCCTCTCTACTGTTGTGTATAATAACAACATATTATT
2388 |||| |||| | | |||| | | || | | || | | |||||
Db 22350 AAGGTAGTTGGGTAGATCACCTGCCACTGGTTGAATTCGCTTACAATAATAACATACCATG
22291

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[illegible]

Claim Rejections - 35 USC § 102

Claims 2-3 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Olek et al (WO 200177384; published October 18, 2001).

The claims are directed to a primer for the detection of cucumber mosaic virus resistant plants which comprises consecutive nucleotides of SEQ ID NO: 2 or 22, said primer contains SEQ ID NO: 1, and a kit containing said primer.

Olek et al teach an oligonucleotide designated as SEQ ID NO: 52575 that contains Applicant's SEQ ID NO:1 (see alignment of sequences below) and a kit containing said oligonucleotide. Therefore, Olek et al teach all claim limitations.

```
RESULT 10
ABC52558/c
ID   ABC52558 standard; DNA; 13 BP.
XX
AC   ABC52558;
XX
DT   21-FEB-2002 (first entry)
XX
DE   Oligonucleotide SEQ ID NO 52575 for detecting SNP TSC0014584.
PI   Olek A, Piepenbrock C, Berlin K;
SQ   Sequence 13 BP; 3 A; 3 C; 5 G; 2 T; 0 U; 0 Other;

      Query Match          100.0%; Score 10; DB 1; Length 13;
      Best Local Similarity 100.0%;
      Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps
0;

QY          1 GTCCCGACGA 10
              |||||
Db          12 GTCCCGACGA 3
```

Claims 2-3 are rejected under 35 U.S.C. 102(b) as being anticipated by
Molyneux, Mitchell (US 6,337,071)

The claim is directed to a primer comprising consecutive nucleotides of SEQ ID
NO: 2 or 22, wherein the primer has SEQ ID NO: 1.

Molyneux teaches a primer that is 100% identical to Applicant's SEQ ID NO: 1.
See alignment of sequences shown below.

```
RESULT 1
AR181979
LOCUS      AR181979                10 bp    DNA        linear    PAT 20-APR-
2002
DEFINITION Sequence 8 from patent US 6337071.
ACCESSION  AR181979
VERSION    AR181979.1  GI:20224895
KEYWORDS   .
SOURCE     Unknown.
  ORGANISM Unknown.
            Unclassified.
REFERENCE  1 (bases 1 to 10)
  AUTHORS  Molyneux, W. Mitchell.
  TITLE    Mosquito and/or flea control
  JOURNAL  Patent: US 6337071-A 8 08-JAN-2002;
FEATURES   Location/Qualifiers
  source   1..10
            /organism="unknown"
            /mol_type="unassigned DNA"

ORIGIN

Query Match      100.0%;  Score 10;  DB 9;  Length 10;
Best Local Similarity 100.0%;
Matches 10;  Conservative 0;  Mismatches 0;  Indels 0;  Gaps
0;

Qy      1  GTCCCGACGA 10
        |||||||||
Db      1  GTCCCGACGA 10
```

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 15-16 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a method of detecting a CMV-resistant plant using SEQ ID NO: 2 or 22, does not reasonably provide enablement for a method of detecting a CMV resistant plant using any consecutive nucleotide sequence of SEQ ID NO: 2 or 22. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or the invention commensurate in scope with these claims.

The claims are drawn to a method for detecting a CMV resistant plant or determining the genotype of a CMV resistant plant by analyzing the genomic DNA of a plant in the presence of a consecutive nucleotide sequence of SEQ ID NO: 2 or 22.

The specification provides guidance for the identification of an OPC-07 primer which showed specificity only to CMV resistant plants from a pool of F2 CMV resistant and susceptible plants (Figures 2a and 2b) and cloning and determination of nucleotide sequence of SEQ ID NO: 2 or 22 using SEQ ID NO: 1 and constructing the primers of SEQ ID NO: 23-28 from said nucleotide sequences. The specification also teaches analysis of the genomic DNA extracted from a CMV resistant plant, susceptible plant, and their F2 population used a template for PCR with the primer combination SEQ ID

NO: 23 and 24, SEQ ID NO: 23 and 25, and SEQ ID NO: 23 and 26, respectively to examine plant genotype (Examples 1-8; Table 2).

The specification, however, does not provide guidance for a method that employs any consecutive nucleotide sequence of any size capable of detecting a CMV resistant plant or capable of determining the genotype of a CMV resistant plant. The specification teaches that a combination of primers SEQ ID NO: 23 and 24, SEQ ID NO: 23 and 25, and SEQ ID NO: 23 and 26, is required in order to examine a CMV resistant plant genotype. The specification does not teach that a single exemplified or non-exemplified primer is sufficient to detect CMV resistance plant or to determine the genotype of a CMV resistant plant. The claims provide no more than an invitation to experiment a single primer of any size from the 5.0 Kb sequence of SEQ ID NO: 22 to see if it works in any plant species. This experimentation is considered excessive and undue, absent evidence to the contrary.

Sequence search results from the primers of the claims shows that the primers are not specific to CMV resistance. For example, SEQ ID NO: 28 is identical to a sequence from human genomic DNA containing a SNP SEQ ID NO: 11973 (see the alignment of sequences below. See, for example, Bharti, A.K et al who teach a nucleotide sequence (Accession no CG834049) that has Applicant's SEQ ID NO: 28 and would not detect a CMV resistant plant. Therefore, it is highly unpredictable that the use of any single primer that has a consecutive nucleotide sequence of SEQ ID NO: 22, wherein the primer is any of SEQ ID NO: 1 and 23-28 would detect a CMV resistant plant or determine the genotype of a CMV resistant plant. Therefore, given this lack of

unpredictability, the limited guidance and working examples in the specification, the state of the prior art as evidenced by Bharti et al and nature of the invention, one skilled in the art would have to proceed with undue trial and error experimentation to screen through the 5.2 Kb sequence of SEQ ID NO: 22 to identify those consecutive nucleotides of any length that are capable of identifying a CMV resistant plant and its genotype.

See, *Genentech Inc. v. Novo Nordisk A/S*, 108 F.3d 1361, 1366, 42 USPQ2d 1001, 1005 (Fed. Cir. 1997) which states It is the specification, not the knowledge of one skilled in the art, that must supply the novel aspects of an invention in order to constitute adequate enablement". The *Genentech* court also held that [w]hile every aspect of a generic claim certainly need not have been carried out by an inventor, or exemplified in the specification, reasonable detail must be provided in order to enable members of the public to understand and carry out the invention". *Id.* In this case, as in *Genentech*, the specification does not provide the "reasonable detail to enable members of the public to understand and carry out the invention as broadly claimed".

Therefore, for all reasons discussed above the claimed invention is not enabled throughout the broad scope.

| | | | | | |
|------------|--|--------|-----|--------|-------------|
| RESULT 3 | | | | | |
| CG834049 | | | | | |
| LOCUS | CG834049 | 295 bp | DNA | linear | GSS 12-NOV- |
| 2003 | | | | | |
| DEFINITION | ZMMBBc0140J06f ZMMBBc (EcoRI) Zea mays subsp. mays genomic clone | | | | |
| | ZMMBBc0140J06 5', genomic survey sequence. | | | | |
| ACCESSION | CG834049 | | | | |

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VERSION CG834049.1 GI:38298448
KEYWORDS GSS.
SOURCE Zea mays subsp. mays (maize)

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MAI
8/30/2010

/Medina A Ibrahim/
Primary Examiner, Art Unit 1638